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DEVICE AND METHOD FOR DEGASSING PLASTICSABSTRACT OF THE DISCLOSURE

An apparatus for degassing plastic materials, e.g., high molecular weight polycarbonate solutions, is described. The apparatus includes a double-shaft extruder having a length-to-diameter ratio of less than or equal to 40, which comprises: (i) two co-rotating and meshing shafts; (ii) an intake opening; and (iii) upstream and downstream portions relative to the intake opening. The shafts of the extruder are designed with a double lead in a degassing zone, and with a triple lead in a pressure build-up zone. Each of the degassing and the pressure build-up zones are down-stream from the intake opening, and the pressure build-up zone is further down-stream than the degassing zone. Also described is a process for degassing plastic materials, which involves providing the described double-shaft co-rotating extruder, into which plastic material is fed, processed and degassed. Entraining agents, such as nitrogen, and other processing additives may be introduced into extruder during the process of the present invention.